Glycobiology 2016 vol.26 N8, pages 804-812

Exploring the glycan interaction in vivo: Future prospects of neo-glycoproteins for diagnostics

Ogura A., Kurbangalieva A., Tanaka K.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016 The Author 2016. Published by Oxford University Press. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.Herein the biodistributions and in vivo kinetics of chemically prepared neoglycoproteins are reviewed. Chemical methods can be used to conjugate various mono- and oligosaccharides onto a protein surface. The kinetics and organ-specific accumulation profiles of these glycoconjugates, which are introduced through intravenous injections, have been analyzed using conventional dissection studies as well as noninvasive methods such as single photon emission computed tomography, positron emission tomography and fluorescence imaging. These studies suggest that glycan-dependent protein distribution kinetics may be useful for pharmacological and diagnostic applications.

http://dx.doi.org/10.1093/glycob/cww038

Keywords

albumin, in vivo imaging, N-glycans, neoglycoprotein, tumor targeting